ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

PAGE	OF PAGES
1	30

1. DATE OF ORDER	2. CONTRACT NO. (If any)
01/17/2014	EP-W-11-016

3. ORDER NO.	4. REQUISITION/REFERENCE NO.
0015	PR-OSWER-14-00084

5. ISSUING OFFICE (Address correspondence to)
HPOD
US Environmental Protection Agency
Headquarters Procurement Operations
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington DC 20460

6. SHIP TO:

a. NAME OF CONSIGNEE
Kristen Gunthardt, TOCOR

b. STREET ADDRESS
1200 Pennsylvania Avenue, N. W.
MC 5303P
Email: Gunthardt.kristen@Epa.gov
Phone: 703-347-8955

c. CITY	d. STATE	e. ZIP CODE
Washington	DC	20460

7. TO: HEATHER TEED

a. NAME OF CONTRACTOR
BOOZ-ALLEN & HAMILTON, INC.

b. COMPANY NAME

c. STREET ADDRESS
8283 GREENSBORO DRIVE

d. CITY	e. STATE	f. ZIP CODE
McLean	VA	22102

f. SHIP VIA

8. TYPE OF ORDER

☐ a. PURCHASE

REFERENCE YOUR:
_____

Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

☒ b. DELIVERY

Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA
See Schedule

10. REQUISITIONING OFFICE
Reconstruct Originating Office

11. BUSINESS CLASSIFICATION (Check appropriate box(es))

☐ a. SMALL   ☐ b. OTHER THAN SMALL   ☐ c. DISADVANTAGED   ☐ d. WOMEN-OWNED   ☐ e. HUBZone

☐ f. SERVICE-DISABLED VETERAN-OWNED   ☐ g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM   ☐ h. EDWOSB

12. F.O.B. POINT
Destination

13. PLACE OF		14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS
a. INSPECTION	b. ACCEPTANCE			
Destination	Destination			

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: (b)(4) TOPO: Kristen Gunthardt Max Expire Date: 01/16/2015 Continued ...					

18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.	17(h) TOTAL (Cont. pages) ◄

21. MAIL INVOICE TO:

SEE BILLING INSTRUCTIONS ON REVERSE

a. NAME	RTP Finance Center	$1,241,073.00
b. STREET ADDRESS (or P.O. Box)	US Environmental Protection Agency RTP-Finance Center Mail Drop D143-02 109 TW Alexander Drive	17(i) GRAND TOTAL ◄ $1,241,073.00

c. CITY	d. STATE	e. ZIP CODE
Durham	NC	27711

22. UNITED STATES OF AMERICA BY (Signature) ▶

23. NAME (Typed)
Bradley Austin
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (Rev. 2/2012)
Prescribed by GSA/FAR 48 CFR 53.213(f)

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.		ORDER NO.
01/17/2014	EP-W-11-016		0015

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Admin Office: 　　HPOD 　　US Environmental Protection Agency 　　Headquarters Procurement Operations 　　Ariel Rios Building 　　1200 Pennsylvania Avenue, NW 　　Washington DC 20460 Period of Performance: 01/17/2014 to 01/16/2015					
0001	e-Manifest Technical Architecture Planning, Base Tasks: This task order is issued based on the contractor's proposal dated January 3, 2014. Award Type: Cost-plus-fixed-fee Total Estimated Cost: (b)(4) Fixed Fee: (b)(4) Term Form Incrementally Funded Amount: $976,645.00 Accounting Info: 14-15-B-31P-302DA1XQ1-2585-LCSP0000--1 431DAP001-001 BFY: 14 EFY: 15 Fund: B Budget Org: 31P Program (PRC): 302DA1XQ1 Budget (BOC): 2585 Job #: LCSP0000 DCN - Line ID: 1431DAP001-001 Funding Flag: Partial Funded: $400,000.00 Accounting Info: 14-15-B-31P-302DA1XQ1-2585-LCSP0000--1 431DAP001-002 BFY: 14 EFY: 15 Fund: B Budget Org: 31P Program (PRC): 302DA1XQ1 Budget (BOC): 2585 Job #: LCSP0000 DCN - Line ID: 1431DAP001-002 Funding Flag: Partial Funded: $23,000.00 Accounting Info: 13-14-B-31P-302DA1XQ1-2585-LCSP0000--1 431DAP001-003 BFY: 13 EFY: 14 Fund: B Budget Org: 31P Program (PRC): 302DA1XQ1 Budget (BOC): 2585 Job #: LCSP0000 DCN - Line ID: 1431DAP001-003 Funding Flag: Partial Funded: $553,645.00				1,079,671.00	
0002	e-Manifest Technical Architecture Planning, Continued ...				161,402.00	

| | TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) | ▷ | | | $1,241,073.00 | |

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.		ORDER NO.
01/17/2014	EP-W-11-016		0015

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Optional Tasks: This line item is issued based on the contractor's proposal dated January 3, 2014. The Government reserves the right to exercise any of the optional tasks. The ceiling listed here reflects the value of all optional tasks. Award Type: Cost-plus-fixed-fee Total Estimated Cost: (b)(4) Fixed Fee: (b)(4) Term Form (Option Line Item) 01/17/2014 The obligated amount of award: $976,645.00. The total for this award is shown in box 17(i).					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))	$0.00	

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PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 348 (Rev. 4/2006)

Prescribed by GSA FAR (48 CFR) 53.213(f)

Base Period

Ceiling	Prior	This Mod	New
Estimated Cost	$0.00	(b)(4)	
Fixed Fee	$0.00	(b)(4)	
Cost Plus Fixed Fee	$0.00	$ 1,079,671.00	$ 1,079,671.00

Funded	Prior	This Mod	New
Estimated Cost	$0.00	(b)(4)	
Fixed Fee	$0.00	(b)(4)	
Cost Plus Fixed Fee	$0.00	$ 976,645.00	$ 976,645.00

EPA Office of Resource Conservation and Recovery e-Manifest Technical Architecture Planning

1.0   STATEMENT OF OBJECTIVES

1.1   Overview

The EPA Office of Solid Waste and Emergency Response (OSWER) provides policy, guidance and direction for the Agency's emergency response and waste programs. The Office of Resource Conservation and Recovery (ORCR) within OSWER works to protect human health and the environment by ensuring responsible national management of hazardous and nonhazardous waste. Working with delegated state waste programs, ORCR implements the 1976 Resource Conservation and Recovery Act (RCRA), and ensures that the resource conservation, recovery and waste management goals of RCRA are met. More specifically, ORCR implements RCRA through the promulgation of regulations, policies, and guidance that apply to facilities and persons generating, transporting, treating and disposing of hazardous and solid waste and by developing national policies. For example, the manifest program within ORCR ensures that hazardous waste shipments are consistently tracked, and that hazardous wastes in fact arrive at permitted waste management facilities. The manifest program specifically is based on both RCRA and Department of Transportation (DOT) hazardous materials (Hazmat) law. These laws together require uniformity in the content and use of the hazardous waste manifest form.

Under RCRA, industrial facilities generating, transporting, and receiving RCRA-regulated hazardous wastes (handlers) must use a manifest form (EPA Form 8700-22) to accompany each off-site hazardous waste shipment. The manifest form provides contact information for the various waste handlers, describes the types and quantities of waste being shipped, and shows the routing of the waste shipment from the generator site, through transporters, and to the destination facility selected to manage the waste. Currently, the manifest form is a paper form that must be prepared initially by generators, physically carried by transporters with waste shipments to management facilities, signed by hand by each handler (generator, transporter and management facility) with each change of custody of the waste materials, and retained as records by all involved. Management facilities that act as the end handlers of waste are known as Treatment, Storage and Disposal Facilities (TSDFs). At the end of this process, the TSDFs must mail copies back to the generators to confirm that delivery has occurred, and must also mail additional copies to State regulatory agencies. EPA currently does not collect domestic manifest forms or manifest data; however, approximately half of States do. All of these manual processing steps result in substantial compliance costs, which amount to about $455 million annually. Since the late 1990's, the US EPA, states, industry and related stakeholders have had a mutual interest in developing a national electronic manifest system (e-Manifest) that would facilitate the electronic transmission of the uniform manifest form and make the use of the manifest much more

cost-effective and convenient for users.

EPA believes that the implementation of e-Manifest could result in annual cost savings exceeding $75 million, and annual burden reductions of between 370,000 and 700,000 burden hours. The implementation of e-Manifest would also produce significant non-economic benefits for all stakeholders, including:

- More timely waste shipment tracking services and higher quality data;
- Transparency and more rapid notification of problems or discrepancies during transit;
- Enhanced inspection/enforcement capabilities for regulators;
- One stop reporting of manifest data to EPA and States;
- Possible consolidation with Biennial Reporting and other reporting; and
- Improved information sharing with emergency responders.

These benefits are not limited to just the submission of manifests electronically to EPA, but rather to the program as a whole, for example, consolidation of all paper submissions at a national level. EPA has worked with stakeholders to determine that the use of electronic manifests will not be mandatory and that the eventual operations and maintenance of the e-Manifest system will be funded by user fees collected from industry users of the system. It is envisioned that the e-Manifest system will be a centralized system where all manifest documents are processed, whether paper or electronic. Therefore, while use of the electronic manifest will not be mandatory, the use of the e-Manifest system for manifest processing will be mandatory. However, EPA's goal is to eventually have all manifests submitted electronically. EPA will need to work with industry to ensure the system meets performance and functionality requirements to ensure use. EPA will also need to work with states to ensure the system provides the required capabilities for data quality assurance (QA), access and reporting.

In early calendar year (CY) 2013, EPA conducted various stakeholder requirements meetings to determine system functional requirements. Following this, a system Alternatives Analysis was conducted to look at various system implementation approaches, all assuming (among other things) a full electronic mobile workflow for up front data collection. The alternatives focused on differences in system customization and hosting. The Analysis recommended that EPA leverage Cloud hosting for initial system development and system launch, and for long term operations and maintenance (O&M), consider re-negotiating the cloud contract model or potentially migrate to an on-premise hosting model to keep costs down.

Also as a part of the planning work conducted, a system Concept of Operations (CONOPS) was completed that, at a high level, outlines what the future system will look like and what areas of interaction e-Manifest will have with external and internal systems to EPA. The CONOPS document further provides a high level 'TO-BE' process and conceptual model for how data will flow from stakeholder to stakeholder

and through the system during the manifest workflow.

While EPA has completed this initial planning, further analysis and planning needs to be done in order to define the specific business processes and technical architecture that will make up the full e-Manifest system and program. In addition, further analysis and planning needs to be done to meet the letter and intent of policy obligations for acquisition planning and information system design. For example, EPA's Enterprise Architecture Policy (EPA, 2012) requires project managers to incorporate solution architectures into the planning for information technology acquisitions. The role of Enterprise Architecture (EA) in capital planning and investment control is detailed in the Office of Management and Budget's (OMB) Fiscal Year 2014 "Guidance on Exhibits 53 and 300" (OMB, 2013).

EPA's EA policy requires project managers to map the solution architecture of individual systems and applications to the Agency-wide architecture. At the system level, this avoids costs for the use of redundant data and components. At the Agency level, this avoids the redundant development of services that would meet the same functional need, and it promotes the efficient reuse of supporting infrastructure. Clear documentation of the solution architecture, therefore, also serves as an authoritative reference for intra-agency and interagency e-Manifest partners for the interconnection of distributed systems and applications, integration with shared services, and deployment on shared infrastructure. These requirements provide an important set of foundational themes on which the work within this task order will consider.

The information gathered and analysis performed as a part of this task order will inform and validate the existing e-Manifest system functional requirements. Formal maintenance of these requirements is **not** within the scope of this task, but will be performed in a separate task order.

1.2 Objectives

The overall goal of this Task Order is to assist EPA with the planning of various aspects of the system's technical solution architecture, building on the work so far conducted in CY2013. As mentioned, the information gathered and analyses performed as a part of this task order will validate the existing e-Manifest system functional requirements and will also formalize the overall architecture solution. Following guidelines from Federal Enterprise Architecture, the formal documentation of the solution architecture will provide an authoritative reference for the development of the full e-Manifest system and interoperable interconnection with shared services.

This section states the performance-based objectives relating to this specific task order. This task order is made up of objectives and deliverables for the various areas of service that e-Manifest will perform. Within each service area, additional background and purpose is defined. Overall, the objectives of this task order include:

I. Development of the e-Manifest implementation strategy and system technical

architecture in the following areas:

1. E-Enterprise/Shared Services Integration
2. Paper Manifest Processing
3. Industry and State System Integration and Shared Services
4. Data Access and Reporting
5. Mobile Workflow
6. System Hosting and Operations and Maintenance
7. Emergency Management and other External Parties Integration

II. Development of an overall system technical architecture that:

1. Demonstrates and ensures traceability to all system functional requirements;
2. Will have a high degree of usability for the stakeholders and users of the system; and
3. Will provide a foundation for system development, testing and eventual deployment.

1.3   Requirements

This section defines the requirements of this task order, including tasks (or subtasks) to be performed and deliverables or services to be provided to meet the Task Order's Objectives. The Contractor shall address these requirements in the Technical Approach section of their proposal.

Task 1: Prepare Work Plan, Provide Monthly Progress Reports and Meeting Support

The Contractor shall prepare and submit a Work Plan (WP) to the TOPO as the first task of this Task Order (TO). The length and detail of the Work Plan shall be appropriate to the size and complexity of the TO. The Work Plan shall serve to expand or clarify, as necessary, any element of the Contractor's technical proposal that requires further elaboration. The Work Plan shall document the written and verbal commitments covered in the technical proposal, and should incorporate task specific planning considerations, including all assumptions and constraints relevant to the tasks. It is expected that the Work Plan provide a common understanding of the expected deliverables and their content for EPA and the Contractor. The Work Plan shall indicate what format all task deliverables are anticipated to be in (e.g. MS Word, MS Excel, MS Project).

TO Monthly Progress Reports are also required that will include project tracking by task in format(s) directed by the TOPO. e-Manifest overall is required to adhere to EPA and OMB Exhibit 300 (CPIC Major) reporting requirements as well as requirements described in the Agency's Earned Value Management (EVM) Procedures (CIO 2120.P-01.2). During the Preliminary Design phase (synonymous with the Office of

Management and Budget's (OMB's) "Planning" phase), e-Manifest must have an established baseline with the appropriate Work Breakdown Structure (WBS). Following this, the Work Plan for this Task Order must include an approved Work Breakdown Structure (WBS) and Performance Measurement Baseline (PMB) from which work may be planned, tracked and reported. Although the development (DME) and O&M phases of e-Manifests will be performed outside of this task order, the Contractor shall coordinate with the TOPO to ensure that the Monthly Progress Reports will be consistent with current and future EVM reporting.

The Work Plan shall be completed within four (4) weeks of the task order's award.

The Contractor shall also provide meeting summaries for any meetings they are asked to attend with EPA or other stakeholders, per the direction of the TOPO. Meeting summaries do not require TOPO review, but may be required to record action items or key decisions. The Contractor shall also provide printed materials to support meetings with EPA or other stakeholders; for example, six (6) copies of a meeting agenda and associated meeting hand outs.

Task 1 Deliverables:

Deliverable	Due Date
1.1 Draft TO Work Plan including WBS and PMB in format(s) directed by the TOPO.	Draft completed within two (2) weeks of the TO's award.
1.2 Final TO Work Plan including WBS and PMB in format(s) directed by the TOPO.	Final completed within four (4) weeks of the TO's award.
1.3 TO Monthly Progress Reports including EVM project tracking by task in format(s) directed by the TOPO.	To be submitted monthly by the 15th of each month.
1.4 Weekly progress reports will be required at the direction of the TOPO.	Per TOPO Direction

Task 2: Stakeholder meeting support

During the development of the other tasks in this SOW, the TOPO may direct the Contractor to assist in user outreach to assist in information gathering for the technical architecture and business processes deliverables. During the period of performance the Contractor may be asked to set up a series of virtual meetings with state and/or other stakeholders in order to determine further expectations and needs within the scope of a task or related tasks under this SOW. For the purposes of planning, the Contractor shall support up to 10-15 different virtual meetings, each lasting up to 3 hours.

Meeting support will include:

 i) Setting up virtual meetings;

(1) The virtual meetings must be scalable and be able to handle a wide varying number of participants using the EPA's web conferencing tools (e.g. Adobe Connect).

ii) Development and distribution of meeting agendas;

iii) Development and distribution of meeting materials, including presentation slides and tutorials/ training materials, if necessary;

iv) Providing meeting outreach support including:

(1) Creating and updating EPA web pages;

(2) Sending mass and direct emails to industry and state associations and other contacts. The Contractor should work with TOPO to build and maintain distribution list(s);

(3) Other meeting outreach at the TOPO's discretion which may include updating forms of social media.

v) Providing logistics support, including:

(1) Participant registration and reminder communication;

(2) Taking notes during the meeting;

(3) Virtual meeting chat monitoring;

(4) Q&A assistance as well as documentation of any Q&A.

vi) Making the meeting minutes from the notes; and

vii) Providing management summaries, if requested by the TOPO.

Task 2 deliverables:

Deliverable	Due Date
2.1 Setting up and providing requested meeting logistic support for a directed number of virtual meetings	Per TOPO direction

Task 3: E-Enterprise/Shared Services Integration Plan

Background

In 2013, the Agency initiated the E-Enterprise Initiative. This is a joint initiative of States and EPA to improve environmental outcomes and dramatically enhance service to the regulated community and the public by maximizing the use of advanced monitoring and information technologies, optimizing operations, and increasing transparency. E-

Enterprise includes a number of complex and simultaneous projects, including streamlining regulations, enhancing data systems, expanding public transparency, and improving collaboration among EPA and the states. For example, it will involve the creation of an electronic/2-way "portal" for the regulated community to apply for EPA and State permits, access information on their permit status, submit compliance information to states and EPA, and receive compliance assistance from environmental agencies. The portal will also result in greater sharing of data on environmental conditions with members of the public, thereby empowering communities to help solve their own pollution problems. In addition, the initiative will develop advanced monitoring technologies that will provide more accurate, timely and reliable environmental data about environmental conditions and specific pollutant discharges. Under E-Enterprise, environmental agencies will also make e-reporting the "new normal" in environmental regulations, thereby significantly reducing paper reporting and reaping major benefits in terms of cost savings and the availability of real-time information.

EPA and the states have developed a Conceptual Blueprint that defines the key principles and components for E-Enterprise. A revised version of this should be available by early December 2013. E-Manifest is a key project within E-Enterprise. This task is intended to determine how e-Manifest will be developed consistent with the vision, principles and components of E-Enterprise. In particular, this task should address how Agency shared services could be integrated into the E-Manifest architecture. This could be by E-Manifest leveraging Agency shared services that exist today or in the near future, and/or how E-Manifest could build services that the Agency will then expand to be shared services.

One specific area that we need to explore is how identity management (user account and registration management) will be handled in the e-Manifest system. There are specific business requirements which may make identity management services more difficult to develop. For example, companies may often have several employees that need to have access to e-Manifest, so we will probably need corporate accounts which allow the company to appoint an administrator, which can add, edit, and delete individual user accounts under the corporate account. We also have the possibility of brokers (third parties) creating, signing, and submitting manifests on behalf of the hazardous waste handler. Furthermore, some e-Manifest data needs to be restricted from view and/or edit for different users, which may be possible through establishing different user roles. All of the business requirements as well as existing EPA services and applications, such as EPA's web access management (WAM) and the CROMERR identity proofing service, need to be taken into account when evaluating options for identity management services.

Deliverables

For this task the Contractor shall work with EPA staff from ORCR, OEI, and OECA to gather information on available or planned standards and shared services. This includes but not limited to data standards, the user management model (e.g. user authentication, credential management, single window), use and possible expansion of

the CROMERR shared services (see below), business process management (BPM) software/tools, and reporting tools. Please note that the services and standards for reporting should be evaluated as part of this task, but they will also be assessed under task 6 (Data Access and Reporting Plan). We expect the Contractor to work with EPA staff to develop a full list of possible services and standards to assess for inclusion in the e-Manifest system.

Specifically, the Contractor shall work to determine what:

➤ shared services (or other standards) exist today which could or should be applied to the e-Manifest system;

➤ shared services (or other standards) currently planned under the E-Enterprise initiative that could be applied to the e-Manifest system;

➤ shared services (or other standards) that exist or are planned that would need to be altered for use with the e-Manifest system; and

➤ services (or other standards), not planned under E-Enterprise, that need to be developed for the e-Manifest system.

The Contractor shall deliver a write-up on each service identified for possible inclusion into e-Manifest that will include:
- a detailed description of the service (or standard),
- how it is being used (for existing services or standards),
- for new services, how it relates to the overall EPA enterprise architecture,
- benefits and disadvantages of using the service for e-Manifest,
- any obstacles to implementing the service for the e-Manifest system, and
- rough order of magnitude to develop or modify new or existing services, respectively.

The Contractor needs to work closely with the TOPO on this task as there may be parallel related work on the E-Enterprise initiative, such as development/refinement of the E-Enterprise Conceptual Blueprint. Since E-Enterprise will be evolving over the period of performance of this task order, we may need the Contractor to re-review the services identified prior to finalizing all deliverables. The final deliverable may include an analysis of the E-Enterprise Conceptual Blueprint and how it can be integrated into the e-Manifest architecture.

Task 3 Deliverables:

Deliverable	Due Date
3.1 Draft and final paper on all services identified for possible inclusion into e-Manifest	Per TOPO direction
3.2 Revised final reflecting any updates to available Agency services (considering E-Enterprise integration)	Per TOPO direction

<u>Task 4:</u> Strategy for Processing Paper

Background

The e-Manifest system will be optional for the regulated community, which means that the regulated community will have the option to continue to submit manifests on paper. Of course we anticipate that the number of paper-based transactions will be the highest at initial system deployment, and then decrease over time as industry continues to adopt the electric system.

Even though the regulated community can continue to submit paper manifests, the process will be significantly changed by requiring users to submit the paper manifests to EPA headquarters, whereas the paper manifests are currently being submitted to the States. To further complicate matters, there are states which require not only a copy of completed paper manifest to be submitted, but also a copy of the initial manifest created by the hazardous waste generator. Also, there are processes performed by the States after they receive the paper manifests, such as QA/QC processes. This presents a challenge since the paper manifests will no longer be going to the States.   For the QA/QC process, we would like to evaluate existing EPA processes/data exchanges, such as the RMP (Risk Management Plan) program, where each paper document is manually entered twice into the system by two different people, and the two entries are then compared and reconciled for data entry errors. Given this example, we would also like to explore other QA/QC processes that are less time intensive. Finally, we would like to evaluate processes where the original paper is protected (i.e. arrives and is immediately scanned and archived).

The e-Manifest legislation essentially states the EPA will put all paper manifests into the e-Manifest system. To handle the paper manifests, we expect a paper processing center will be established with staff manually inputting data from typed or handwritten manifests into the e-Manifest system. We also expect to use some type of optical character recognition software to make the process as efficient as possible.

We know that paper manifests will be mailed to the paper processing center, where they will be processed and scanned, but we would like to explore additional processes which can make processing the paper more efficient and cost effective, such as whether TSDFs can scan and send the paper submissions electronically to EPA (via CDX) or whether users can fax manifests rather than mailing a paper copy. Obviously, we would like to explore the possibility of leveraging solutions already designed and/or implemented at EPA.

EPA's Cross-Media Electronic Reporting Regulation (CROMERR) sets the legal framework for all electronic reporting by industry to EPA. The e-Manifest system will be CROMERR-compliant, which means industry submitting signed electronic manifests to EPA need to meet the CROMERR electronic signature validation requirements. For this

task, per TOPO direction, the Contractor shall support evaluation of how the paper process may need to meet CROMERR standards.

Deliverables

Specifically, the Contractor shall provide the following deliverables:

➤ Deliverable 4.1: Operational Diagram: Building on the other Task 4 deliverables, the Contractor shall provide an overall operational diagram for how the paper processing center will operate. This should include inputs, outputs and internal processes handled by the paper processing center. The deliverable shall also include a list of recommended components and equipment involved in establishing the transcription, as well as a rough cost breakdown for establishing the paper processing center. The list of recommended components should indicate the expected throughput of the components, so that we can estimate how the equipment needs should be scaled to the expected paper manifest volumes over time (e.g. how many staff are required to operate equipment and transcribe data for x numbers of scanners, etc). Finally, the deliverable shall include a rough order of magnitude for maintaining the paper processing center, taking into account the estimated adoption rate for the e-Manifest system.

➤ Deliverable 4.2: Strategy for transcription and submission options: This strategy document shall provide recommendations for technical specifications for optical character recognition that should be applied to e-Manifest. It should further provide recommendations for technical specifications for scanning and faxing software and hardware products that should be applied to e-Manifest taking into account quality assurance issues and CROMERR requirements (if needed). The strategy shall provide information on the synergies between software and hardware to provide an overall certain level of quality on the scanned and faxed documents. Upon direction from EPA TOPO, the Contractor may be asked to identify, evaluate, and provide recommendations on additional processes which can make processing the paper more efficient and cost effective, such as whether TSDFs can scan and send the paper submissions electronically to EPA (via CDX) and whether users can fax manifests rather than mailing a paper copy. For the specific example cited, we expect the Contractor will need to reach out to TSDFs to determine if the proposal is viable. This deliverable could include benefits, disadvantages, obstacles to implement, and rough order of magnitude to implement and maintain. The Contractor should consult with several large states' tracking programs for expertise that could inform these strategies and recommendations.

➤ Deliverable 4.3: Solution Options for State Interaction: The Contractor shall work with EPA staff and the States to determine the critical state paper processing processes and requirements that will be impacted by EPA HQ collecting the paper manifests instead of the States. One of these processes will be the States QA/QC process on paper manifests after the States receive them. We believe that in order to gain an accurate assessment of what each state needs/requires, the Contractor will need to reach out to all the states by webinar. After the impacted processes and

requirements are identified, the Contractor shall work with EPA staff to determine which processes and requirements need to be further evaluated under this task order. After paring down the list, the Contractor shall propose at least three solutions to address the impacted state processes and/or requirements. To date we are only aware of the QA/QC process change and various state requirements to collect a copy of the paper manifest created by the waste generator.

➢ Deliverable 4.4: State and EPA QA/QC Process Flows: Building on deliverable 4.3, the Contractor shall develop a recommended process flow and business rules for how EPA HQ and States will conduct QA/QC (both automated and manual) on paper manifests received. The Contractor should consult with states that currently conduct QA/QC on the processes they currently employ.

➢ Deliverable 4.5: Strategy for Archiving: The Contractor shall develop a strategy for housing and archiving all the paper manifests. This deliverable should include estimates on physical space needed to store paper artifacts from the manifest process, taking into account requirements on the schedule for retaining paper artifacts. Also included in this deliverable should be a recommended process for efficiently retrieving older paper manifests for review, which could occur frequently for re-review of the paper for data quality purposes. _Upon direction from EPA TOPO, the Contractor may be asked to develop business requirements for copy of record under the paper process as part of this deliverable.

Deliverable	Due Date
4.1 Draft and final Operational Diagram	Per TOPO direction
4.2 Draft and final strategy for transcription and submission options	Per TOPO direction
4.3 Draft and final Solution Options for State Interaction	Per TOPO direction
4.4 Draft and final State and EPA QA/QC Process Flows	Per TOPO direction
4.5 Draft and final Strategy for Archiving	Per TOPO direction

Task 5: Strategy for Industry and States System Integration and Data Sharing

Background

Industry stakeholders have indicated that a major e-Manifest system requirement is that their own hazardous waste management IT systems can communicate with the e-Manifest system. For example, if a large TSDF has an existing IT system that provides

the capability for completing the manifest in an electronic fashion, the requirement is that this existing system can integrate and communicate with e-Manifest in order to meet the EPA and DOT requirements for manifest completion and submission.

Further, state stakeholders have indicated that a major requirement is that their own state IT systems for handling manifest information be able to incorporate data from the national e-Manifest system in order to be able to continue their own processes for manifest correction, fee collection and inspection.

The e-Manifest Concept of Operations document provides a high level 'TO-BE' process and conceptual model for how data will flow from stakeholder to stakeholder and through the system during the manifest workflow. However, this high level document does not contemplate the specific processes and technical architectures that will need to be in place in order to meet the requirements that e-Manifest communicate with the various state and industry systems. Further, additional analysis is required to determine how data QA will occur between states and industry once the electronic manifest is complete (this analysis should be done in coordination with the QA process for the paper manifests).

In this regard, the purpose of this task is to:

> Define the business processes and technical architecture for electronic manifest creation, workflow, e-signature and data quality assurance between industry systems and the e-Manifest central system.

> Define the business processes and technical architecture for state data access to electronic manifests within the electronic manifest workflow as well as after manifest completion (for the purposes of data QA and use).

The Contractor should note the following assumptions within this task:

1. The Contractor will use the existing e-Manifest planning materials (functional requirements, CONOPS, pilot project outcomes) as well as additional information gathered from stakeholder interaction in order to complete the deliverables.

2. State interaction with e-Manifest will utilize the Exchange Network and services via CDX and like integration with industry systems, will be designed in a standard fashion. Separate user specific services, data exchange standards and schema to accommodate multiple disparate needs will **not** be in the scope of e-Manifest.

3. e-Manifest will provide a standard approach for integrating and communicating with multiple industry IT systems; separate user specific services, data exchange standards and schema to accommodate multiple disparate needs will **not** be in the scope of e-Manifest.

4. The processes and architecture pieces for interacting with e-Manifest via a mobile user interface is out of the scope of this task, but is rather covered in a separate task.

5. CROMERR approaches/services that are explored as a part of this task work will, to the extent possible, utilize existing shared services approaches or will be fashioned in such a way as to be able to be reused in other areas of EPA's data exchanges.

Deliverables

Working with EPA (OSWER, OEI, etc) as well as state and industry stakeholders, the Contractor shall provide the deliverables outlined below in order to fulfill the purposes of the task.

In determining processes and architectures for industry and state system integration, the e-Manifest functional areas that shall be covered include electronic manifest creation, workflow, electronic signature and the data QA process. Within these areas, per TOPO direction, distinct processes may need to be looked at including the processes and architectures needed to support reference data upload and maintenance. For example, maintaining state specific waste code information through Exchange Network services may need to be considered (however, this specific process will be looked at in Task 8: Hosting and O&M Strategy). User authentication and management within the area of industry and state system interaction may be evaluated to the extent relevant for this task; however, the majority of this analysis will be performed under Task 2: E-Enterprise/Shared Services Integration.

The technical architectures shall inform the approach the e-Manifest system will take with respect to the various layers or areas of logic of the overall application, for example, data storage, data access, business rule processing, and actual application layers. From this, characteristics of hardware and software that will be required or appropriate for e-Manifest shall be discussed. Further, technical considerations such as the nature of transactions that will occur (e.g. batch upload of manifests at certain points; individual manifest upload) or how business rule processing/data validation will occur should be included.

With regard to electronic signature that industry must perform as a part of the electronic manifest workflow, the Contractor shall consider standards and approaches for industry that meet EPA CROMERR requirements. These standards should include approaches that can be incorporated into interactions between industry systems and the national e-Manifest system in an automated fashion. For example, services-based CROMERR approaches that provide industry with the ability to utilize their own applications while meeting the CROMERR requirements for electronic signature should be defined and evaluated. The Contractor shall further explore the concept of a delegated official signing via a CROMERR signature and taking responsibility for one or more manifests signed within their own systems not necessarily using a CROMERR process. The deliverable for this work will be a set of standard specifications that multiple industry users can utilize within their own systems in order to adhere to CROMERR and EPA requirements for electronic signature.

In addition to the business process and technical architecture documentation, per TOPO direction, the Contractor shall support additional software artifacts such as data sharing templates, services approaches and/or specifications as well as schema that will facilitate system to system integration and communication.

Specifically, the Contractor shall provide the following deliverables:

1) Business process document outlining industry system interaction with e-Manifest (system to system)

2) Technical architecture document outlining industry system interaction with e-Manifest (system to system)

   a) Per TOPO direction, additional deliverables include data sharing templates, API/services approaches and specifications, as well as schema (XML, etc) for system to system interaction.

3) Business process document outlining state data access within the workflow as well as after TSDF signature via CDX

4) Technical architecture document outlining state data access

   a) Per TOPO direction, additional deliverables include data sharing templates, services approaches and specifications, as well as schema for data sharing to the states.

5) CROMERR standards for industry systems; this will include specifications for how industry can adhere to the electronic signature requirements when submitting electronic manifests to the e-Manifest system.

Task 5 Deliverables:

Deliverable	Due Date
5.1 Draft and final industry interaction business process document	Per TOPO direction
5.2 Draft and final industry interaction technical architecture and associated deliverables	Per TOPO direction
5.3 Draft and final state interaction business process document	Per TOPO direction
5.4 Draft and final state interaction technical architecture and associated deliverables	Per TOPO direction
5.5 CROMERR standards for industry systems	Per TOPO direction

<u>Task 6:</u> Data Access and Reporting Plan

Background

We anticipate that the three largest groups of users with data needs will be the States, hazardous waste handlers, and the general public. However, we also know that the enforcement community, academia, and environmental groups will also be interested in manifest data. For this task, we need to understand the reporting requirements for each of the specific groups listed, as well as develop recommendations for how to meet those requirements. We believe the overall reporting plan will be a combination of data services from e-Manifest, data provided through other EPA reporting applications (e.g. Envirofacts, ECHO, etc.), and limited canned or ad hoc reporting directly through the e-Manifest frontend.

States currently have existing systems which allow them to access data and run reports on manifests submitted to their state. We need to gather information (probably through a webinar) on how to allow states to continue their current reporting operations. This includes understanding how states are currently making manifest data available to the public, emergency responders, hazardous waste handlers, etc, as well as how states respond to inquiries and FOIA requests.

For users from the general public, we anticipate that reporting capabilities will go through existing Agency applications (e.g. Envirofacts, ECHO, etc.), rather than create a whole new public reporting system for e-Manifest. Further, the public reporting capability should allow EPA to reduce the number of FOIA requests.

Hazardous waste handlers will most likely want reports on data from their company. We would like to explore the possibility of providing dashboards in e-Manifest which would display various information to handler users such as the status of incomplete manifests, historical manifests, and other data.

Per TOPO direction, whatever data reporting outlet is recommended, we need to gather the requirements on how that outlet could and should be restricted from providing CBI and PII data to incorrect users.

All of the reporting outlets need to align with current EPA mobile reporting requirements and capabilities.

The Contractor shall gather information from States on existing reporting requirements and needs. The Contractor shall also gather information regarding other stakeholders' data needs. For information gathering, we anticipate that a webinar will be the most effective way to gather this information (per direction under Task 2 of this SOW). The Contractor can consider other methods to gather information such as an online survey to a targeted distribution group, but information collection request (ICR) restrictions should be considered.

Deliverables

Specifically, the Contractor shall provide the following deliverables:

➢ Deliverable 6.1: Data Access and Reporting Strategy Document: This deliverable will provide recommendations on how the data and reporting requirements/needs can be met. This deliverable should include a list of recommended reporting avenues (e.g. data services), refined business process requirements (from the above deliverables), a general workflow and design.

➢ Deliverable 6.2: Data Access and Reporting Technical Architecture: Under direction from the TOPO, develop overall recommended technical architecture design for all reporting and data access needs.

Task 6 Deliverables:

Deliverable	Due Date
6.1 Draft and final Data Access and Reporting Strategy Document	Per TOPO Direction
6.2 Draft and final Data Access and Reporting Technical Architecture	Per TOPO Direction

Task 7: Mobile Strategy

e-Manifest users must have flexibility in terms of how they interact with the system and how they sign for documents, including the Manifests themselves. The mobile strategy will utilize several mobile solutions to offer users flexibility in how they interact with the system. The mobile strategy also must have a low maintenance and upgrade burden for both EPA and the regulated community.

The system must adapt to the needs of a wide user base with a varying frequency of user interactions. Therefore multiple mobile solutions must be employed with in the broader mobile strategy. Currently, some users interact with several manifests per day and other users only process a few manifests in a year. Some users only interact with manifests in one location where a desktop solution might be appropriate, while others like transporters interact in several places where even carrying a laptop would be inconvenient.

For this task the Contractor shall provide deliverables that inform the broader mobile strategy. The following tasks will build on each other and the final mobile strategy will comprise of different solutions that interface with the e-Manifest system.

No mobile solution will be available to industry users that is not CROMERR compliant. The Contractor shall first provide a list of potential options that may be CROMERR compliant and then at the TOPO's direction, provide an options paper to EPA that details several mobile solutions that can be used to meet CROMERR. The Contractor

shall focus on identity management and copy of record access. Please note, copy of record does not need to be device dependent and may rely on CDX shared services.

For the first deliverable the Contractor shall explore 6-9 mobile solutions. An exact number of solutions will be provided by the TOPO after the Contractor has provided a list of potential solutions that may be CROMERR compliant.

Included in the 6-9 mobile solutions that will be directed by the TOPO, the Contractor shall explore the following options (Please note, EPA does not view all of these options as solutions and these options may be combined and used to form a proposed solution. For example, an offline smart phone application that reads a bar coded manifest):

- The current proposed CROMERR solutions for e-Manifest, which were mentioned in the proposed rule. These options include the use of a partial driver's license ID as the second authenticating factor and the other is the use of digitized signatures.
- An interim solution discussed between EPA and DOJ is simultaneously collecting wet-ink signatures along with digitized signatures. This option should only be evaluated per TOPO direction.
- At least two separate solutions must include options for users to use the system in offline capacity.
- The use of a standard cell phone (e.g use of cell phone camera and/or SMS).
- The use of other various mobile devices (e.g. smart phone, tablet, etc.).
- The use of a bar coded manifest form.
- The use of token devices.

After EPA has reviewed the CROMERR options paper, EPA will instruct the Contractor which mobile solutions to provide a more detailed options paper. The more detailed options paper will answer additional questions about the select group of mobile solutions and the associated technologies they employ. The Contractor shall provide options for implementing solutions and take into account the possible complexities of the e-Manifest system.

For each solution identified, the options paper must at least identify the following in the solution's own section:

1. Name of the mobile solution
   - Give the common name of the mobile solution. For example, "One time Password"
2. Description of the mobile solution
   - Brief description of the mobile solution and any identified technology that interfaces with the solution
3. Connectivity with the system
   - Identify how the information is transmitted to e-Manifest. For example, "Cellular Network", "WIFI", "POTS", "Hard line Connection"
4. Possibility for offline use

- Yes or no question, Can the technology be used offline?
5. Development considerations
    - List the development considerations that EPA would need to consider if implementing the solution. For example:
        i. Is the technology proprietary or open source?
        ii. If proprietary, are there competing products or only one vendor available to the government?
        iii. Software dependencies
        iv. Hardware dependencies
        v. Is the technology customizable
        vi. How device agnostic is the technology? What platforms does it work on?
        vii. What skill set is required to develop the technology? Is the skill set limited to a small number of professionals?
        viii. What are bandwidth considerations and other capacity concerns, (fat client, thin client, etc.)
        ix. In general terms and compared to other options, the rough level of effort for deploying and maintaining the technology (e.g. High, Medium, Low)
6. Ease of deployment
    - Following item 5, provide a rough level of effort for initially deploying the technology related to the mobile solution and a description of a standard deployment
7. Ease of maintenance
    - Following item 5, provide a rough level of effort for maintaining the technology related to the mobile solution and detail how updates are pushed to or pulled by the user community.
8. Usability and user maintenance
    - The user's experience and rough level of effort to use, deploy, and maintain the mobile strategy from the industry user's prospective.
9. Data Quality Assurance
    - Can business rules be applied at the user's level of interaction to ensure only quality manifests are submitted to the system from the technology
10. Identity Verification
    - How is the user's identity verified in a manner that meets §3.2000(b)(5)(vii)
11. Security
    - What security concerns or features are inherent with the technology used for this mobile solution
    - Security requirements previously identified for the project, must be considered.
12. CROMERR Compliance Concerns and Advantages
    - Identify any concerns or advantages the mobile solution has with compliance with CROMERR
    - Copy of record access (Viewing the human readable copy, is it possible from the device/ technology or from a web browser)

13. Identify any current users of the solution and the technologies they employ for it
    - If any potential e-Manifest user employs this solution or technology, they should be listed.
14. The TOPO may add additional criteria

We anticipate that the Contractor will be working not only with ORCR staff on this task, but also with staff from OEI and OECA.

After the TOPO has reviewed the options paper, the TOPO will instruct the Contractor which mobile solutions to provide business process flows and technical architectures for these solutions. These documents will detail how various and viable mobile solutions and their associated technologies would interact with e-Manifest from the user's initial interaction through their periodic use as well as how EPA would interact, deploy, and maintain the mobile solutions.

The solutions selected would each be intended to be used by the various types of industry users to interact with e-Manifest and become the mobile strategy. Outreach would be needed to determine impacts of the strategy. Specifically at the TOPO's direction the Contractor shall reach out to any companies identified as currently utilizing any of the selected technologies.

As previously mentioned in the Statement of Work; the e-Manifest Concept of Operations document provides a high level 'TO-BE' process and conceptual model for how data will flow from stakeholder to stakeholder and through the system during the manifest workflow. However, this high level document does not contemplate the specific processes and technical architectures that will need to be in place in order to meet the requirements that e-Manifest communicate with the various state and industry systems. Further, additional analysis is required to determine how data QA will occur between each EPA directed mobile solution and the system.
In this regard, the purpose of this task is to:

- ➢ Define the business processes and technical architecture for electronic manifest creation, workflow, e-signature and data quality assurance between each mobile solution and the e-Manifest central system.

- ➢ Define the business processes and technical architecture for mobile user data access to electronic manifests within the electronic manifest workflow as well as after manifest completion (for the purposes of data QA and use).

- ➢ Define the business processes and technical architecture for mobile user identity verification and associated artifacts required for compliance with CROMERR include initial verification as well as any future interactions.

- ➢ Define the specific business processes and technical architectures for the deployment of each mobile solution.

> Define the specific business processes and technical architectures for the maintenance of each mobile solution.

Assumptions

1. The Contractor will use the existing e-Manifest planning materials (functional requirements, CONOPS, pilot project outcomes, and the Mobile Strategies Options paper under this Task) as well as additional information gathered from stakeholder interaction in order to complete this deliverable.

2. CROMERR approaches/services that are explored as a part of this task work will utilize existing shared services approaches or will be fashioned in such a way as to be able to be reused in other areas of EPA's data exchanges.

Task 7 Deliverables:

Deliverable	Due Date
7.1 Draft and final mobile solutions CROMERR options paper	Per TOPO Direction
7.2 Draft and final detailed mobile solutions options paper as directed by the TOPO	Per TOPO Direction
7.3 Draft and final business process document outlining each mobile solution as directed by the TOPO	Per TOPO Direction
7.4 Draft and final technical architecture and requirements document outlining each mobile solution as directed by the TOPO	Per TOPO Direction

Task 8: Hosting and Operations and Maintenance (O&M) Strategy

Background

The e-Manifest system will need to be operational 24/7/365 to accommodate the millions of manifests created during the course of a year. This task is intended to gather the performance standards that will be need to operate the e-Manifest system, as well as assess where each part of the system will be hosted. We believe the overall hosting approach will be a hybrid of certain elements hosted at NCC (e.g. CDX components, shared services, data mart, etc.), while other elements may be hosted elsewhere. In particular, EPA wishes to consider innovative cloud hosting solutions that will allow e-Manifest to scale to an increasing number of users over time.

In addition to assessing activities directly handled by a data center, we also need to determine how a helpdesk will be established. The e-Manifest will have a dedicated helpdesk.

Two additional areas of O&M that we would like to explore in more detail are reference data management and release planning (i.e. new versions of e-Manifest being implemented). We need to gather requirements from stakeholders for both areas, and then define an overall strategy for each area.

Deliverables

Specifically, the Contractor shall provide the following deliverables:

➢ Deliverable 8.1: System Hosting Performance Standards: The Contractor shall provide recommended performance standards for functions handled by the data center(s), as well as how those individual performance standards can be met:

> Some of the specific areas of evaluation include but are not limited to:
> ➢ Data storage – based on the volume of data and cost, do we need or should the data center be using a third party cloud storage provider?
> ➢ Capacity and performance – whatever data center hosts e-Manifest, the data center will need dedicated equipment and processes (e.g. database servers, node servers, frontend servers, load balancers, queuing, patching, registration system refreshes, etc) to ensure the smooth operation of the system. We need to know the number and types of equipment needed.
> ➢ Staff to operate and maintain a 24/7 system – based on anticipated issues, we need to know how many people and areas of expertise will be needed to support the e-Manifest at the data center taking into account that support will be needed 24/7.
> ➢ Security – work with EPA staff to coordinate this piece with the security assessment work being done under a separate task order.
> ➢ Business continuity and disaster recovery
> ➢ Configuration management

➢ Deliverable 8.2: Hosting Architecture Diagram: The Contractor shall provide a recommended overall hosting technical architecture diagram of how all of the performance standards from the previous deliverable can be met. This should include a recommendation of where each of the components will be hosted. In order to complete this deliverable the Contractor should work with EPA staff to make certain assumptions about the design of the e-Manifest system.

➢ Deliverable 8.3: Helpdesk Operations Document: The Contractor shall provide an overall recommended layout for a helpdesk dedicated to e-Manifest. This should also include:

- a review of the helpdesk software used,
- an estimate of the volume of both critical and non-critical issues we should anticipate along with the typical labor hours needed to resolve the issues,
- a proposal for the triage and tiering structure of the helpdesk.
- an estimate of the number of personnel and level of expertise of personnel at each level of the helpdesk
- how helpdesk calls received based on the paper manifest will be processed
- how the e-Manifest helpdesk will interface with the CDX helpdesk (such as through the tiering structure and helpdesk software – since CDX has established helpdesk tools)
- how the States will be integrated into the helpdesk to address programmatic and state-specific issues (this will require outreach to gather State requirements),
- recommended avenues for receiving issues from users, such as via phone, email, chat, possibly directly through the e-Manifest system (the overall recommendation should limit the more costly and time intensive avenues, like phone calls), and
- a cost estimate to establish and maintain a dedicated helpdesk.

➢ Deliverable 8.4: System Release Plan: Work with EPA staff and stakeholders to gather requirements on release schedules, as well as provide a recommended overall release plan. The release plan should include proposed schedules for minor and major releases and service packs, taking into account requirements for backward compatibility and lead time needed by different systems and users to implement changes relating to a release.

➢ Deliverable 8.5: Reference Data Management Plan: Work with EPA staff and stakeholders to gather requirements on how state-specific and industry reference data will need to be updated, such as state-specific waste codes. Specifically, this deliverable should list all of the reference data elements that could change in e-Manifest, as well as the party responsible for initiating the change to the reference data. We may need the Contractor to work with stakeholders to determine the stakeholder events that would trigger a need to update the reference data. Finally, this deliverable shall include an overall release strategy for updating reference data, which should include recommended mechanisms for updating reference data.

Task 8 Deliverables:

Deliverable	Due Date
8.1 Draft and final System Hosting Performance Standards	Per TOPO Direction
8.2 Draft and final Hosting Architecture Diagram	Per TOPO Direction
8.3 Draft and final Helpdesk Operations Document	Per TOPO Direction
8.4 Draft and final System Release Plan	Per TOPO Direction

Deliverable	Due Date
8.5 Draft and final Reference Data Management Plan	Per TOPO Direction

Task 9: Emergency Response Strategy and Integration with other Parties (Optional)

Background

Prior to a federal e-Manifest system, manifests were handled by the States. Some states have electronic systems, while others just store the paper manifests. Now that all the manifests will be captured with closer to real-time data and stored in one database, there are some new possible trading partners or beneficiaries to the e-Manifest data. In particular, there has been past discussions on how to supply e-Manifest data to emergency responders from EPA, DHS, and DOT, as well as state and local emergency responders. When a transporter spills hazardous waste, the shipping papers and the hazardous waste manifest are typically in the cab of the truck, which depending on the type of waste, may not be safe for a first responder to obtain. If the data in e-Manifest is close to real-time, and that data can somehow be communicated to emergency responders, then emergency responders can safely assess the situation without entering truck to extract the hazardous waste manifest.

Another avenue we would like to explore is the possibility of integrating with US DOT's HM-ACCESS initiative, which is intended to make the DOT shipping paper electronic. DOT's initiative has a specific component for emergency response providers and law enforcement personnel. Since the RCRA manifest can be used as the DOT shipping paper for hazardous waste, we need to coordinate with DOT on this initiative on developing an overall emergency response plan.

We do need to ensure that we are not discontinuing any existing interfaces that the States may currently have in place.

Deliverables

Specifically, the Contractor shall provide the following deliverables:

➤ Deliverable 9.1: Inventory of State Data Partners: Work with the States, probably through a webinar, to create a list of any existing interfaces or trading partners with the State manifest systems. Please note that the Contractor should specifically ask the States about how information is currently shared with emergency responders.

➤ Deliverable 9.2: Emergency Response Use Cases: Create use cases for how emergency responders and law enforcement can obtain manifest data electronically. This deliverable should include an as-is paper use case along with the anticipated

electronic use cases taking into account the DOT HM-ACCESS initiative. The use cases should also take into account that data in e-Manifest may not be in real-time.

> Deliverable 9.3: e-Manifest Emergency Response Strategy: Upon direction from the TOPO, the Contractor may be asked to provide an overall recommended strategy for providing manifest data to emergency responders and law enforcement personnel.

Task 9 Deliverables:

Deliverable	Due Date
9.1 Draft and final Inventory of State Data Partners	Per TOPO Direction
9.2 Draft and final Emergency Response Use Cases	Per TOPO Direction
9.3 Draft and final e-Manifest Emergency Response Strategy	Per TOPO Direction

Task 10: Overall Technical Architecture Strategy (Optional)

Tasks 3 through 9 are intended to evaluate how the major components of the e-Manifest system will be designed. During the course of this task order, we envision that information on certain tasks may impact the work done on other tasks. Per TOPO direction, the Contractor shall develop an overall system technical architecture strategy. This architecture strategy document may include, but is not limited to: a technical architecture diagram (application interface diagram), additional technical requirements, detailed description for how components and processes will interact with one another, interface control specifications, and other artifacts as described in the referenced OMB document below. This task is dependent on how the work under tasks 3 through 9 will unfold during the period of performance.

Per TOPO direction, the Contractor shall formally document the solution architecture for the core e-Manifest system using guidance from The Common Approach to Federal Enterprise Architecture (OMB, 2012). If asked, at a minimum, the documentation should include the core artifacts listed in Table A of the referenced OMB document for Business Services, Data and Information, Enabling Applications, and Host Infrastructure. To the extent that they are relevant to the solution architecture, the Contractor may also be tasked with establishing and delivering the remaining artifacts listed for Tables C, D, E, and F.

Task 10 deliverables:

Deliverable Description	Due Date
10.1 Draft and final overall technical architecture strategy document	Per TOPO direction

Task 11: Transition and Close Out

The Contractor shall provide for transition or close-out of the TO at the end of the period of performance as directed by the TOPO. The Contractor shall provide EPA with all TO artifacts including data inputs and methodologies used to perform the above tasks (e.g. source citations list and actual documentation). The Contractor shall also assist in initial advisory support for the follow-on contract for e-Manifest implementation if requested by the TOPO. This initial advisory support may include: attending e-Manifest planning meetings, providing written or oral responses to questions regarding the activities conducted under this TO, and upon request, providing recommendations for future implementation activities for the e-Manifest project.

Task 10 deliverables:

Deliverable Description	Due Date
11.1 Output of all TO artifacts (e.g., CD or DVD copy of all files)	Per TOPO direction

1.4   Other Information

1.4.1 On-site Contractor Support

__ Yes _X_ No.   The task order requires on-site Contractor support.

1.4.2 Government Furnished Space or Property (GFP)

__ Yes   _X_ No. The task order involves the provision of government space.

__ Yes   _X_ No. The task order involves the provision of GFP.

1.4.3 Additional Progress or Financial Reporting

_X_ Yes   __ No. The task order requires additional progress or financial reporting.

As described in section 1.3, Task 1, e-Manifest will be required to meet OMB Exhibit 300 reporting requirements, and thus is the Contractor shall coordinate with the TOPO to ensure that monthly reporting provides for current or future EVM reporting at the individual task level. This TO also

requires, as a part of the Work Plan, an approved Work Breakdown Structure (WBS) and Performance Measurement Baseline (PMB) from which work may be planned, tracked and reported.

Note: The ITS-BISS contract requires that Contractors provide a monthly progress report to the TOPO. Monthly reports describe progress on TO activities and funds spent. The CO can provide more information about content and format of the monthly Contractor progress report if necessary.